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From: Sonich-Mullin, Cynthia
Sent: Thur 7/6/2017 5:09:13 PM
Subject: ADDENDUM: NRMRL Weekly Report: July 10-14

Bob,

A couple of additions to this week's NRMRL report:

1. Flint Update:

Region 5 is planning conference call next week that will include ORD to "check in on the oversight of the Flint utility." Per their email: "With the various changes in staff at the utility, including F&V coming in to manage plant operations and distribution system staff leaving, it is important to make sure everyone (EPA/MDEQ/Flint) is on the same page as far as roles/responsibilities and activities related to the operation of the utility as a whole."

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2. ERIS and visit to Ada (of course we didn't forget!):

We are looking forward to your and Chris' visit to the Ada facility on Monday, July 10, where you will conduct an all-hands meeting following by discussions with management and staff. NRMRL staff will provide a tour of the Robert S. Kerr Environmental Research Center (RSKERC); you and Chris will also have a chance to meet with some of the scientists in NRMRL's Groundwater, Watershed, and Ecosystems Restoration Division to discuss their research. NRMRL's Acting Deputy Director, Alice Gilliland will also participate.

We are also looking forward to participating in the discussions with ERIS on Tuesday, July 11, at the Ada RSKERC laboratory. On Tuesday afternoon, Richard Lowrance, GWERD Director, will give an overview of the Ada division to the ERIS Board and NRMRL staff will present ORD research vignettes: technical Support for cleaning up contaminated sites (David Jewett), innovative subsurface remediation technologies (Rick Wilkin), managing risks from leaking underground storage tanks (Jim Weaver), and managing risks to watershed water quality (Ken Forshay). The ERIS Board will then tour RSKERC. Alice Gilliland is NRMRL's lead for state interactions and will participate.

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From: Sonich-Mullin, Cynthia

Sent: Wednesday, July 05, 2017 2:31 PM

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Bob,

We are pleased to provide this week's installment of our NRMRL highlights. In addition to the Flint highlights provided below, we are looking forward to tomorrow's briefing to Richard Yamada on ORD's role in Flint, Michigan.

We have two requests for **technical assistance/support** that we are in the process of exploring. Both of these are on air-related issues:

1. Region 9 has requested support in addressing waste management challenges faced by American Samoa and our other Pacific Islands in Region 9. They have specifically requested assistance and expertise in particulate matter and combustion as well as incineration and emissions (specifically dioxins and furans).
2. John Vandenberg has requested support on an issue he is working on with Region 6. High air concentrations of chloroprene have been measured at schools near a facility emitting chloroprene in LaPlace, LA. In evaluating potential near-term risk reduction measures, a question was posed as to whether an activated carbon system might be placed in schools or homes (perhaps as part of the air conditioning systems) to remove chloroprene from the indoor environment. John has requested engineering and technical support to address some of the community's questions and concerns.

NRMRL Weekly Report: July 10-14

Hot Issues:

Request for technical support to Osage County, OK. Region 6 contacted NRMRL for groundwater expertise and technical support with ongoing issues of high salinity in Bird Creek. In October 2016, a rancher reported oil sheen, elevated temperatures, and sudsing in the creek. Two injection wells located approximately half a mile from the impacted area were found to have mechanical integrity issues. Region 6 conducted an initial geophysical assessment using OhmMapper (a resistivity meter that measures the electrical properties of rock and soil) to locate any conductive features that may be related a potential brine release. However, the Region's survey results were inconclusive. NRMRL's assessment will include additional work with OhmMapper, followed by focused electrical resistivity imaging surveys at selected sites if warranted by the results. The Region has provided data related to surface water sampling locations, injection and production wells in the area, and the initial OhmMapper results for review. Additional discussions with the Region will occur after NRMRL conducts its detailed OhmMapper survey. The affected area is located on Tribal land, Osage Nation.

Flint, MI Update:

Flint update calls. Tom Speth participated in the EPA Flint Task Force call on June 30. Participants discussed chlorine residual data and other ongoing projects related to Flint. We look forward to the update call with you tomorrow.

Upcoming Public Events:

None to report

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Upcoming Major Decisions:

None to report

This Week/Last Week:

State Support: Field studies to support cleanup at Fort Devens Superfund Site, MA, July 5-7. Randall Ross and Steve Acree are conducting field research to provide performance verification for groundwater remediation and facilitate evaluation of new monitoring tools to measure groundwater seepage flux. NRMRL is providing technical assistance to Region 1 and the **Massachusetts Department of Environmental Protection** to investigate the impact of recently implemented remedial measures on groundwater flow and contaminant transport. Fort Devens is a former military training base with petroleum, arsenic, iron, and magnesium contamination in the groundwater, soil, and sediment. **Statute: CERCLA (Superfund)**

Collaborations with Princeton University at Duke Forest field site, NC. Since late May 2017, representatives from Princeton's Department of Civil and Environmental Engineering have been visiting the Duke Forest field site, 7,000+ acres located in Durham, Orange and Alamance Counties. Princeton faculty are working with John Walker to test an open path ammonia (NH₃) instrument at field sites (including above the forest canopy and at ground level). Ammonia emissions can be precursors to particulate matter such as ammonium nitrates and ammonium sulfates. The team from Princeton will continue to visit and monitor data from the Duke Forest field site in the coming months. This effort is part of a RARE project with Region 8.

Upcoming Presentations July 5-August 5:

Presentation on thermal remediation to EPA Groundwater Forum, July 13. Eva Davis is presenting an "Overview of Thermal Remediation" during the EPA Groundwater Forum conference call. She will discuss how thermal remediation can be used at Superfund sites and what remediation can be accomplished. The primary audience of this call are EPA Superfund Remedial Project Managers.

Participation in International Trace Elements Conference, Zurich, Switzerland, July 13-22.

Kirk Scheckel will be participating the [International Conference on the Biochemistry of Trace Elements \(ICOBTE\)](#). In addition to being elected the in-coming Vice President of the International Society of Trace Element Biogeochemistry (as reported May 31), Kirk has organized two symposia for the conference, “Biogeochemistry of emerging trace elements in aquatic and terrestrial systems” and “Rethinking waste for nutrient and energy recovery.” Kirk will also present:

- “Source attribution of lead using geospatial and stable isotope analysis” (derived from research with Region 7)
- “In-vitro bioaccessibility method for prediction of relative bioavailability of arsenic in contaminated soils” (derived from OLEM’s Technical Review Workgroup Bioavailability Committee efforts and collaborative research with NHEERL and NERL)
- “Application of high energy resolution x-ray fluorescence detection spectroscopy on environmental samples” (poster).

Presentation at Gordon Research Conference, South Hadley, MA, July 30-August 4.

David Wahman will present on disinfection byproducts and biofilm interactions in drinking water distribution systems at the [2017 Gordon Research Conference on Drinking Water Disinfection Byproducts](#). The conference will be attended by academics, students, and professionals from government and the water industry.

Poster presentation at International Congress on Membranes and Membrane Processes, San Francisco, CA, July 31-August 4.

Leland Vane will present a poster titled “Impact of swelling characteristics on the permselective properties of multi-layer composite membranes for water removal from alcohols,” at the [International Congress on Membranes and Membrane Processes](#). Solvent recovery/reuse leads to both economic and environmental benefits, saving industries money on solvent purchases while reducing the impact of manufacturing and disposing of solvents. The conference will be attended by individuals from academia, the private sector, and government.

Other Upcoming Activities:

Participation in visit by OLEM’s Environmental Response Team (ERT), Cincinnati, July 12-13.

In conjunction with their visit to Cincinnati to give training on the [Scribe](#) software tool, members of ERT’s National Data Team will meet with ORD to learn more about our emergency response capabilities. Regan Murray and Darren Lytle will discuss capabilities deployed to handle drinking water emergencies, such as in Flint, and provide a tour of our laboratory capabilities, including the Drinking Water Pilot Plant. NHSRC is coordinating the visit.

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